UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/795,968 | 03/08/2004 | Kurt A. Habecker | 3600-198-02 | 8631 |

95360 7590 04/20/2010

Cabot Corporation/ LAK
Cabot Corporation, Law Department
157 Concord Road
Billerica, MA 01821

| EXAMINER | |
|---|---|
| YANG, JIE | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1793 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 04/20/2010 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

RECORD OF ORAL HEARING

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

---

*Ex Parte* KURT A. HABECKER and JAMES A. FIFE

---

Appeal 2009-013118
Application 10/795,968
Technology Center 1700

---

Oral Hearing Held: March 16, 2010

---

Before EDWARD C. KIMLIN, CHUNG K. PAK and
PETER F. KRATZ, *Administrative Patent Judges.*

APPEARANCES:

ON BEHALF OF THE APPELLANT:

LUKE A. KILYK, ESQUIRE
Kilyk & Bowersox, P.L.L.C.
400 Holiday Court, Suite 102
Warrenton, Virginia 2018

THE USHER: Good afternoon. Calendar No. 56, Appeal No. 2009-013118, Mr. Kilyk.

MR. KILYK: Good afternoon, Your Honors.

JUDGE KIMLIN: Good afternoon, Mr. Kilyk. The reporter today is Mr. Weston. I see you already gave him your card.

MR. KILYK: Yes, sir.

JUDGE KIMLIN: So we can get the show on the road.

MR. KILYK: Okay.

JUDGE KIMLIN: Proceed.

MR. KILYK: Now, the present invention with respect to the appeal claims, I'll speak first about Claim 36, which recites an agglomerated niobium powder, and that agglomerated niobium powder is characterized by its capacitance and DC leakage. Capacitance, in this business, is, you know, its rating from the standpoint of what it can hold charge-wise, and the higher the better. And DC leakage is, of course, the loss of that charge, and the lower the better. In Claim 36, the test conditions are recited, which is sintering at 1100 degrees Celsius for ten minutes, and you are anodizing or forming at a formation voltage of 20 volts at 60 degrees C. There's one other independent claim, Claim 65, that mimics Claim 36 but recites that the test is at a formation voltage of 35 volts.

I note that the present invention claims -- or benefits under 35 U.S.C. Section 120 to an earlier filing date, back to May 12th, 1999, and that's relevant with respect to one of the references that the Examiner cites. The Examiner relies on Chang for a 102 rejection and, in another 102 rejection, relies on Chang in combination with He, H-e, which the Examiner relies on for evidentiary value. And lastly, the Examiner relies on, under

35 U.S.C. Section 103, a PCT publication, which I'll call the 248 PCT, in view of Chang and He.

Now, regarding Chang, there's one particular sentence that the Examiner relies on, which refers to the fact that tantalum and niobium, according to the Examiner, and Chang states; that they may have or can have similar chemical and physical properties. Chang does not provide any other details regarding that statement. There are no examples in Chang that describe niobium powders. There are no other characterizations of the niobium powder whatsoever. So outside of this statement, 99.9 percent of Chang relates to tantalum powders, and other than that statement, we have no idea what type of characteristics Chang is referring to with respect to the niobium powder.

JUDGE KIMLIN: Isn't the assignee of Chang your assignee, as well?

MR. KILYK: Yes, Your Honor.

JUDGE KIMLIN: Don't you think it would have been helpful, maybe, for someone, the Applicant or the Assignee, to clarify just what Chang meant on the record?

MR. KILYK: It may have been helpful, except that Chang, at the time of this filing, was no longer an employee of Kabot Corporation, the Assignee. And so, I believe that statement would have been more difficult to achieve. I do note that there is a Declaration by Mr. Kimmel, who, at the time of this application, was heading up the niobium research. That Declaration by Mr. Kimmel was submitted in a related niobium case of the assignee, but nonetheless, I believe it's relevant in this case, and that's why it was submitted as an exhibit which describes the lack of interchangeability between tantalum and niobium. And it's not just an opinion. He also

provides some data to show that certain characteristics are not the same for tantalum and niobium, such as leakage. At formation voltages above 50 or 60 volts, you actually see radical differences.

So I would say I did not know Mr. Chang when he filed this application, but I believe it's fair to say that the statement was said in the abstract, without any data, and even the claims of Chang go to tantalum. And so I'm left to deal with that statement, but unfortunately, there's no evidence to back it up. And I believe the evidence we've submitted on appeal would contradict that statement. And I'll even go further. Assuming arguendo we give him that credit for that interchangeability, I would like to discuss that, as well, because we've submitted evidence to even show assuming arguendo that they are interchangeable, you would not get the properties we have in Claim 36.

So with respect to Chang, while Chang also mentions chemical and physical properties, I will add that Chang never says the electrical properties of tantalum and niobium are interchangeable.

JUDGE KIMLIN: In all due respect, that's somewhat of a disingenuous argument since the entire disclosure of Chang is directed to making a capacitor -- to its capacitance. And so when it's talking about we're only going to discuss tantalum because niobium is so similar to the properties, the logical conclusion is they're talking about electrical properties or any properties that relate to the capacitance of that.

MR. KILYK: I would respectfully disagree, Your Honor, just because -- and I'd be happy to point to why I have this position. If you look at the He reference, which is cited for evidence only, but He actually distinguishes categories of chemical, physical and electrical in categories.

Also, the PCT reference actually describes, when you look at the U.S. counterpart, physical, chemical, and separately electrical properties. So they are separated in categories.

JUDGE KIMLIN: For sure. For sure they're separate properties. But my point is that Chang is directed to making a capacitor.

MR. KILYK: He is.

JUDGE KIMLIN: Why would he be thinking of any other properties?

MR. KILYK: True, but I guess what I'm saying is he didn't know the electrical properties are not interchangeable and, thus, did not say that. When you look at niobium and tantalum on the periodic table, you could come to the conclusion they must have some similarities. But when it comes to electrical, I don't believe Chang had any evidence to say they are similar, nor did he say they are similar. And in fact, we have evidence to show they're not similar when it comes to electrical.

JUDGE PAK: Counsel, Mr. Chang, I guess under, I presume, supervision of your law department, signed under oath this is what he said and what he said is true.

MR. KILYK: He believed it to be true, Your Honor. It's different from being true, though. From a physical and chemical point of view, that may be an accurate statement, Your Honor. From an electrical point of view, which he did not mention, I believe that is not true. So I don't think he had a problem with what he signed, actually. I think it's accurate from that point of view. And second, if you look at what's being claimed, he went to tantalum powders, in fact. Which is also very telling.

From the standpoint of Chang -- but like I said, as I proposed to this Board, we submitted declaration evidence to show that -- let's assume you

can take tantalum powder at the surface area that Chang proposed, which was around .6 meters squared per gram, and you subject it to the particular testing properties of Claim 36. We showed that it would come nowhere close to the capacitance of at least 65,000. That was done based on the evidence we had available and extrapolating that data to the particular sintering temperature and formation voltage.

Now, in the Examiner's Answer, the Examiner judged that information to be conclusory. I don't think it's conclusory. I believe the person providing that declaration evidence, number one, had expertise in this field; number two, it was based on actual experimental data; and third, extrapolating to the particular sintering temperature and formation voltages and accepted practice. And what we did in this appeal, we actually submitted our competitor, the largest manufacturer of niobium and tantalum to show that in various graphs of this brochure that is attached to the Appeal Brief, extrapolation is a common practice and quite predictive of the properties once you know some other sintering temperature and formation voltage temperature parameter. Excuse me, the formation voltage, not temperature. So I believe the extrapolation is a fair analysis provided under declaration evidence that's not merely conclusory.

And so, given that Chang does show niobium, if the Board chooses to take that understanding, Chang still does not achieve the capacitance set forth in Claim 36.

JUDGE KIMLIN: And you attribute that to your lower surface area of the particles that you use?

MR. KILYK: It would be the higher surface area.

JUDGE KIMLIN: Or the higher.

MR. KILYK: Is one condition that leads to it, yes, Your Honor. And in preparing for this, you know, the comment can always be made that, well, why can't you just pick any surface area and go there? And I would respond in two ways: One, there actually is a point where, now that it's 2010, you can have too high of a surface area and you won't be able to get capacitance because the particles could be so small that you don't get the type of sintering conditions you need for the necking of the particles. So it's not this easy to comment, well, any surface area going up is known or obvious. I would disagree because Chang, in essence, actually says .6 or below. He doesn't say at least. He actually was very careful about picking his surface area with regard to tantalum. And if we apply that to niobium, then the teaching would still apply.

From the standpoint of the He reference, I wish to first say it's not prior art, and at times, I believe the Examiner has tried to interpret He in a prior-art way. The niobium and tantalum of the He reference in no way corresponds to Chang, so I don't believe you can rely on He for any evidence value or inherency value, or for any good reason, because the methods of making the niobium and tantalum of He are different. The surface area and other conditions of He are different than compared to Chang. And even when you look at the tantalum and niobium of He, because he has both in the reference, the conditions that He prepared and tested those particular powders are even different. If anything, He actually shows the two aren't interchangeable because you have to treat each one different based on test conditions and how form them.

With respect to the WO reference, WO-248, this reference relates strictly to tantalum. It came after Chang. It does not mention

niobium. It does not even have one sentence suggesting any interchangeability. And with respect to combining this WO reference with Chang, number one, Chang relates to very low surface area tantalum with respect to the examples and has that one sentence on niobium, and the WO reference merely and only shows tantalum. So I don't believe it would be fair for one skilled in the art to start with the WO reference and argue that you would expect those same properties for niobium because, number one, the WO reference and Chang relate to different surface area powders and other conditions for the powder with respect to particle size. And second, the declaration evidence shows that there is no interchangeability when it comes to certain capacitances.

So I believe the evidence that we have submitted shows that they are not interchangeable, and the WO reference actually never mentions interchangeability. You would think that the WO reference would have said or covered niobium if it was that easy to cover a year or two after Chang, if not more than a year or two after Chang. So to me, it's very telling from a -- and that is -- the assignee is Stark in that particular filing for the WO reference. To me, it's very telling that someone comes after Chang and chooses not to mention niobium and concentrates strictly on tantalum and the data. I would think in this business someone would gladly take the two, if they could, in a patent. To me, it's further evidence to show that there is no easy interchangeability in these two powders.

Pretty much, that's my presentation. I could go over each Declaration if this Board would like.

JUDGE KIMLIN: No, I have no further questions.

JUDGE PAK: No further questions.

MR. KILYK: Okay. Thank you very much for your time, Your Honors.

Whereupon, the proceedings, at 1:13 p.m., were concluded.